

1 CLAIMS

2 What is claimed is:

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- 4 1. A high level disinfecting composition comprising an aqueous solution
- 5 having a pH less than 7 and which contains a conjugated alphatic
- 6 dialdehyde in an amount effective to achieve high level disinfection as
- 7 determined by the ability of said composition to kill all bacterial cells and
- 8 spores in contact with said composition when exposed to said composition
- 9 for a time and at a temperature sufficient to exert its biocidal effect.
- 10
- 11 2. A high level disinfecting composition comprising an aqueous solution
- 12 having a pH less than 7 and which contains an amount of conjugated
- 13 alphatic dialdehyde effective to achieve high level disinfection as
- 14 determined by the ability of said composition to kill all microorganisms in
- 15 contact with said composition within 30 minutes at 20⁰C.
- 16
- 17 3. A high level disinfecting composition of claim 2 wherein the bacterial cells
- 18 are *Mycobacterium bovis* BCG.
- 19
- 20 4. A high level disinfecting composition of claim 2 in which the conjugated
- 21 alphatic dialdehyde has less than 8 carbons and at least one aldehyde
- 22 group adjacent to a double bond.
- 23
- 24 5. A high level disinfecting composition of claim 2 in which the conjugated
- 25 alphatic dialdehyde is 2-butenedial.

- 1 6. A high level disinfecting composition of claim 2 which further comprises
2 surfactants, glycols, corrosion inhibitors, antioxidants, sequesterent, odor
3 surpressants, dye and fragrance.
4
- 5 7. A method for disinfecting a surface which comprises immersing said
6 surface in and maintaining said surface in contact with the high level
7 disinfecting composition of claim 1 for a period of time and at a temperature
8 effective to achieve high level disinfection of said surface.
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- 10 8. The method of claim 7 wherein the 2-butenedial concentration in said high
11 level disinfecting composition is between 0.5 and 2.0 weight percent.
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- 13 9. The method of claim 7 wherein the 2-butenedial concentration in said high
14 level disinfecting composition is estimated to be between 0.1 and 0.5
15 weight percent.
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- 17 10. A sterilizing composition comprising an aqueous solution having a pH less
18 than 9 and which contains an amount of conjugated alphatic dialdehyde
19 effective to sterilization as determined by the ability of said composition to
20 kill all micro-organic spores in contact with said composition within 32
21 hours at 20⁰C.
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- 23 11. A sterilizing composition of claim 10 wherein the micro-organic spores are
24 that of *Bacillus subtilis* and *Clostridium sporogenes*.
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1 12. A sterilizing composition of claim 10 in which the conjugated alphatic
2 dialdehyde has less than 8 carbons and at least one aldehyde group
3 adjacent to a double bond.
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5 13. A sterilizing composition of claim 10 in which the conjugated alphatic
6 dialdehyde is 2-butenedial.
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8 14. A sterilizing composition of claim 10 which further comprises surfactants,
9 corrosion inhibitors, antioxidants, sequesterent, odor surpressants, dye and
10 fragrance.
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12 15. A method for sterilizing a surface which comprises immersing said surface
13 in and maintaining said surface in contact with the sterilizing composition of
14 claim 8 for a period of time and at a temperature effective to achieve
15 sterilization of said surface.
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17 16. The method of claim 15 wherein the 2-butenedial concentration in said
18 sterilizing composition is less than 2.0 weight percent.
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20 17. The method of claim 15 wherein the 2-butenedial concentration in said
21 sterilizing composition is about 0.5 weight percent.
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